

# Novel Gene Editing Tool Offers Hope for Heart Diseases- Article 2



**ABBIE** is a revolutionary technology that can edit the DNA of living cells with unprecedented precision and efficiency. It has the potential to transform the field of cardiology by enabling new ways of discovering and developing drugs, as well as treating heart disease. In this post, we will explore two of the main applications of ABBIE in cardiology: drug discovery and gene therapy.

Drug discovery is the process of finding new compounds that can modulate the function of a biological target, such as a protein, RNA, or a gene that is involved in a disease. ABBIE can facilitate drug discovery by allowing researchers to edit the DNA of cells in a dish (in vitro) and make them express a specific gene that is related to a cardiac disease. For example, ABBIE can be used to create cells that have a mutation in a gene that causes cardiomyopathy, a condition that adversely affects the heart muscle. These cells can then be exposed to different drugs and screened for their effect on the mutated cells and function thereof. In this manner, ABBIE can help identify new pharmacological candidates that can potentially treat or prevent a condition such as cardiomyopathy.

Gene therapy is the delivery of genetic material into cells to correct or modify their function. ABBIE can enable gene therapy by allowing researchers to edit the DNA of cells directly in the body (in vivo) and alter their behavior or activity. For example, ABBIE can be used to target and modify the cardiac conduction cells of the heart, which are responsible for generating and transmitting electrical signals that coordinate the heartbeat. ABBIE can be used to correct or enhance the function of these cells in patients who have genetic conditions that affect their cardiac conduction system, such as long QT syndrome or Brugada syndrome. By doing so, ABBIE can help restore normal heart rhythm and prevent arrhythmias or sudden cardiac death in these patients.

These are just some of the exciting possibilities that ABBIE offers for cardiology. ABBIE is still in its early stages of research and development, but it has already shown promising results in animal and human cells. ABBIE will soon become a reality and make a difference in the lives of millions of people who suffer from heart disease. Stay tuned for more updates on ABBIE and its applications in cardiology!

**Courtesy:**

Dr. David Aguilar, Ph.D.

COO

SOHM, Inc.